

REMARKS/ARGUMENTS

Claims 1-10 have been rejected. Claim 3 has been cancelled without prejudice to or disclaimer of the subject matter encompassed thereby in order to further prosecution of this application. Applicants expressly reserve the right to file continuing applications or take other such appropriate measures to seek protection for the inventions encompassed by the cancelled subject matter.

Claims 1, 2, 4, 7, 9, and 10 have been amended as described more fully below. Claim 1 was amended to recite the specific compounds described in Example 3 and Example 4 of the specification. Claim 2 was amended to convert the claim from dependent format to independent format. Claims 2 and 7 were amended to correct dependencies and for clarity. Claims 9 and 10 were amended to method of treatment format. Claims 4, 9, and 10 were amended to depend alternatively from either claim 1 or claim 2. Support for these claim amendments may be found throughout the specification and originally filed claims. Accordingly, no new matter has been introduced by way of these claim amendments.

Claims 1-2 and 4-10 are currently pending in the application. Reexamination and reconsideration of the claims are respectfully requested in view of the following remarks. The Examiner's comments in the Office Action dated April 11, 2008 are addressed below in the order set forth therein.

The Rejection Under 35 U.S.C. §101 Should Be Withdrawn

Claims 9 and 10 were rejected under 35 U.S.C. §101 on the basis that the claimed use did not set forth the steps involved in the process. Claims 9 and 10 have been amended to method of treatment format. Accordingly, Applicants submit that this rejection has been obviated and request that it be withdrawn.

The Rejection Under 35 U.S.C. §112, First Paragraph, Should Be Withdrawn

Claims 9 and 10 were rejected under 35 U.S.C. §112, First Paragraph, for lack of written description. The Examiner states that the term "hypertension related diseases" is not defined in

Appl. No.: 10/587,824
Amdt. Dated September 11, 2008
Reply to Office Action of April 11, 2008

the specification. Claims 9 and 10 have been amended to remove this term. Accordingly, Applicants submit that this rejection has been obviated and request that it be withdrawn.

The Rejection Under 35 U.S.C. §112, Second Paragraph, Should Be Withdrawn

Claims 7 and 9-10 were rejected under 35 U.S.C. §112, Second Paragraph, for indefiniteness. The Examiner states that the phrase “deriving the compound monomer by . . . condition” in claim 7 is confusing and that the term “hypertension related diseases” within claims 9 and 10 is not defined in the specification. Claim 7 has been amended to clarify the derivation step (as described in Examples 3 and 4 of the specification) and Claims 9-10 have been amended to remove the phrases cited by the Examiner. Accordingly, Applicants submit that this rejection has been obviated and request that it be withdrawn.

The Examiner states that claim 4 improperly depends from claim 2 for failure to limit the scope of claim 2. Based upon the Examiner’s description of the claim, Applicants believe that the Examiner intended to refer to claim 3. Claim 3 has been cancelled, as described above. Accordingly, Applicants submit that this rejection has been obviated and request that it be withdrawn.

The Rejections Under 35 U.S.C. §102(b) Should Be Withdrawn

Claims 1-4 were rejected under 35 U.S.C. §102(b) as being anticipated by Varfalvi *et al.* (HU 44495). Claim 3 has been cancelled, as described above. This rejection is traversed with respect to the remaining claims for the reasons provided below.

The compounds within claims 1-2 and 4 contain two methyl groups connected to the carbons at positions 1 and 5 of their cyclohexane rings. Varfalvi *et al.* describe compounds that have R groups at the 1, 2, and 4 carbons of their cyclohexane rings. Varfalvi *et al.* therefore do not describe each and every element of claims 1, 2, and 4. Accordingly, Applicants submit that Varfalvi *et al.* do not anticipate claims 1, 2, and 4 and request that this rejection be withdrawn.

Claim 1 is rejected under 35 U.S.C. §102(b) as being anticipated by Carling *et al.* (U.S.

Appl. No.: 10/587,824
Amdt. Dated September 11, 2008
Reply to Office Action of April 11, 2008

Patent No. 5,939,436). Claim 1, as amended, recite compounds 1-ethyl-3,3,5,5-tetramethyl-4-piperidone or 3,3,5,5-tetramethyl-4-piperidanol. Varfalvi *et al.* also do not describe these compounds and therefore do not describe each and every element of claim 1. Accordingly, Applicants submit that this rejection has been obviated and request that it be withdrawn.

Claim 1 is rejected as “not patentable over CN1261363A and CN1363297A.” Claim 1 has been amended, as described above, to be directed to compounds 1-ethyl-3,3,5,5-tetramethyl-4-piperidone or 3,3,5,5-tetramethyl-4-piperidanol. Applicants have also concurrently filed English translations of these documents. Neither of these documents teaches the compounds of claim 1. Accordingly, Applicants submit that this rejection has been obviated and request that it be withdrawn.

The Rejections Under 35 U.S.C. §103(a) Should Be Withdrawn

Claims 1-5 were rejected under 35 U.S.C. §103(a) as being obvious in view of Varfalvi *et al.* or Carling *et al.* Claim 3 has been cancelled, as described above. This rejection is traversed with respect to the remaining claims for the reasons provided below.

Claims 1-2 and 4-5 are directed either to compounds 1-ethyl-3,3,5,5-tetramethyl-4-piperidone, 3,3,5,5-tetramethyl-4-piperidanol, or a compound of formula II, and pharmaceutical compositions comprising those compounds. Varfalvi *et al.* describe 4-hydroxypiperidines and intermediates in the manufacture of light stabilizers. Carling *et al.* disclose five-membered heteroaromatic compounds as dopamine receptor subtype ligands.

The factual determinations underpinning the legal conclusion of obviousness include 1) the scope and content of the prior art, 2) the level of ordinary skill in the art, 3) the differences between the claimed invention and the prior art, and 4) evidence of secondary factors, also known as objective indicia of non-obviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). The U.S. Supreme Court has held that the “teaching, suggestion, motivation to combine” (TSM) test promulgated by the Federal Circuit provides a “helpful insight” when assessing obviousness. *KSR Int’l Co. v. Teleflex, Inc.*, No. 04-1350, slip op. at 14 (U.S. Apr. 30, 2007). The Federal Circuit recently articulated the following principles for applying the Supreme

Court's *KSR* teachings to the question of chemical obviousness:

First, *KSR* assumes a starting reference point or points in the art, prior to the time of invention, from which a skilled artisan might identify a problem and pursue potential solutions. Second, *KSR* presupposes that the record up to the time of invention would give some reasons, available within the knowledge of one of skill in the art, to make particular modifications to achieve the claimed compound . . . Third, the Supreme Court's analysis in *KSR* presumes that the record before the time of invention would supply some reasons for narrowing the prior art universe to a "finite number of identified, predictable solutions.

Eisai Co. v. Dr. Reddy's Laboratories, Inc., No. 07-1397, slip op. at 7-8 (Fed. Cir. July 21, 2008)(internal citations omitted). The court went on to state that "[i]n other words, post-*KSR*, a prima facie case of obviousness for a chemical compound still, in general, begins with the reasoned identification of a lead compound." *Id.* In *Eisai*, although the claimed and prior art compounds were structurally similar, the Federal Circuit could not find any motivation to make a substitution in the prior art compound that would remove a substituent that was identified as functionally important. *Id.*

The compounds of claims 1 and 2 are described within the present application as useful for treating hypertension as well as cardiovascular and cerebrovascular diseases, and contain two methyl groups connected to the carbons at positions 1 and 5 of their cyclohexane rings. As described above, Varfalvi *et al.* describe 4-hydroxypiperidines and intermediates in the manufacture of light stabilizers, and these compounds have R groups at the 1, 2, and 4 carbons of their cyclohexane rings. One of skill in the art looking to develop compounds useful for treating hypertension and related disorders would not have had a reason to look for a lead compound from among chemicals used in the manufacture of light stabilizers, nor would they have had any reason to expect that modifications of the compounds of Varfalvi *et al.* to change the R groups from the 1, 2, and 4 positions to the 1 and 5 positions would be successful in producing compounds with the desired therapeutic properties. Accordingly, applying *KSR* and *Eisai*, one of skill in the art would not have found it obvious to modify compounds of Varfalvi *et al.* to arrive at the compounds of claims 1 and 2.

Carling *et al.* disclose five-membered heteroaromatic compounds as dopamine receptor

Appl. No.: 10/587,824
Amdt. Dated September 11, 2008
Reply to Office Action of April 11, 2008

subtype ligands, and state that these compounds may be useful in treating a variety of dopamine related disorders, including hypertension (see Col. 1). However, Carling *et al.* specify that their compounds are members of a “class of heteroaromatic compounds incorporating a substituted five-membered heteroaromatic nucleus which contains at least two nitrogen atoms” (see Abstract). The compounds of claims 1 and 2 contain only one nitrogen atom. As in *Eisai*, one of skill in the art would not have had any reason to make a substitution in the prior art compounds of Carling *et al.* that would remove a substituent that was identified as an important aspect of Carling *et al.*’s class of compounds. Accordingly, applying *KSR* and *Eisai*, one of skill in the art would not have found it obvious to modify compounds of Carling *et al.* to arrive at the compounds of claims 1 and 2.

For the reasons stated above, one of skill in the art would not have found it obvious to modify the cited prior art compounds to arrive at the compounds of claims 1 and 2. Accordingly, Applicants request that this rejection be withdrawn.

Claim 1 is rejected as “not patentable over CN1261363A.” Claim 1 has been amended, as described above, to be directed to compounds 1-ethyl-3,3,5,5-tetramethyl-4-piperidone or 3,3,5,5-tetramethyl-4-piperidanol. Applicants have also concurrently filed English translations of these documents. Neither of these documents teaches or suggests the compounds of claim 1. Accordingly, Applicants submit that this rejection has been obviated and request that it be withdrawn.

Appl. No.: 10/587,824
Amdt. Dated September 11, 2008
Reply to Office Action of April 11, 2008

CONCLUSION

In view of the aforementioned amendments and remarks, Applicants respectfully submit that the rejections of the claims under 35 U.S.C. §§101, 112, First and Second Paragraphs, 102(b), and 103(a) are overcome. Accordingly, Applicants submit that this application is now in condition for allowance. Early notice to this effect is solicited.

It is not believed that extensions of time or fees for net addition of claims are required. However, in the event that extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. §1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

/edward r. ergenzinger/

Edward R. Ergenzinger
Registration No. 47,549

Customer No. 00826
ALSTON & BIRD LLP
Bank of America Plaza
101 South Tryon Street, Suite 4000
Charlotte, NC 28280-4000
Tel Raleigh Office (919) 862-2200
Fax Raleigh Office (919) 862-2260

ELECTRONICALLY FILED USING THE EFS-WEB ELECTRONIC FILING SYSTEM OF THE UNITED STATES PATENT & TRADEMARK OFFICE ON SEPTEMBER 11, 2008.